



**US ENVIRONMENTAL PROTECTION AGENCY
Region 1 New England - OEME
11 Technology Drive, North Chelmsford, MA 01863**

Inspection Report

Date: February 12, 2015
Subject: Ballard Acres - Concentrated Animal Feeding Operation (CAFO) Inspection
Prepared by: Lisa Thuot – USEPA Compliance Inspector

I. Facility Information:

Name: Ballard Acres
Location: 1900 Ballard Road
St. Albans, VT 05478

Owner/Operator: Kristan Ballard, Owner
Mailing Address: (same as above)

II. Inspection Information:

Date of Inspection: September 18, 2014

EPA Inspector(s): Lisa Thuot – Compliance Inspector (EPA Region 1/OEME)
Diane Boisclair – Compliance Inspector (EPA Region 1/OES)

Facility Contact(s)

During Inspection: Kristan Ballard, Owner

State Contact(s): Trevor Lewis, VT Agency of Agriculture

Weather Conditions: Overcast, windy, temperature in the high 50s (°F).

III. Purpose of Inspection:

The purpose of the inspection was to assess applicability of the Concentrated Animal Feeding Operation requirements under the Clean Water Act at 40 C.F.R. Part 122.23.

Entry Procedures

The inspection was announced in advance by telephone to Mr. Ballard, the owner of the farm. Upon arrival, EPA inspectors presented their inspector credentials to Mr. Ballard who provided a walk-through tour of the farm and dairy operations. Grady Ballard, Mr. Ballard's son, was introduced but he did not accompany us during the inspection tour.

IV. Inspection Information

This inspection is a follow-up to an EPA inspection conducted on October 27, 2009 with representatives from the VT Agency of Agriculture. Ballard Acres (“the farm”) is a dairy operation which has been owned by the Ballard family since 1982. There are currently 225 mature dairy cows and 180 heifers at the farm. The farm has 2 manure pits which were designed by NRCS. The farm does their own manure spreading.

In the summer of 2010, a new silage leachate/runoff collection and treatment system was installed at the farm. The system was designed by Rob Achilles of the VT Agency of Agriculture, and separates high-flow and low-flow runoff from the silage bunkers. High flow (i.e. runoff from rain events) is directed into a new collection pond, and low-flow (i.e. concentrated runoff) is directed to the manure pit.

The silage area is graded so the active bunkers (which contain feed) will drain to a low trough that channelizes leachate/runoff to the new collection system (picture #1). The southernmost bunkers, which were not being actively used for feed storage, drain into the grass on the southern end of the concrete slab (picture #2). There is a concrete-walled collection bay around the inlet to the new silage leachate system. The collection bay and inlet to the low-flow tank contained solids which required maintenance/clean-out (pictures #3-5). Mr. Ballard said the solids are periodically scooped out of the bay. The leachate collection system has two tanks: one for high-flow and one for low-flow runoff, and each tank has a pump. The low-flow tank is pumped to the manure pit, and the high-flow tank is pumped to a new detention pond (picture #6). The pond was designed for a 25-year, 24-hour storm.

Water from the high-flow pond flows through a pipe and valve into an adjacent vegetated treatment cell (picture #7). Mr. Lewis explained that the valve handle needs to be fluttered because it periodically gets clogged with solids (picture #8). During the inspection, Mr. Lewis opened the manhole cover and fluttered the valve (up and down) connected to the pipe; this released the blockage and allowed water to flow into the vegetated treatment cell. The treatment cell, which was designed by Rob Achilles of the VT Agency of Agriculture, contains layers of materials including bark mulch and crushed stone.

The end of the vegetated treatment cell has a layer of gravel; no pipe or outlet was observed (picture #9). Mr. Ballard said he has not seen [surface] water flowing from the treatment area. Flow (surface or groundwater) from the treatment cell enters an adjacent grassy area that Mr. Ballard uses as a part-time pasture for milking cows about 10 days in the summer. The grassy pasture borders a drainage ditch/swale. We asked Mr. Ballard if this swale/ditch was natural or man-made; Mr. Ballard believed that it was natural. Some small manure piles were field-stacked nearby, but we did not observe evidence of runoff from the piles.

Around the south perimeter of the silage storage, the farm built a new concrete bunker wall. They also installed crushed stone and a drain to settle/capture stormwater runoff from the adjacent hillside fields and direct it to a roadside ditch on Ballard Road (picture #10). Mr. Ballard said the new drainage system helps keep stormwater runoff out of the silage bunkers.

V. Exit Briefing

An exit briefing was conducted by EPA inspectors and Trevor Lewis with Mr. Ballard. The following items were discussed:

- The silage leachate collection bay and inlet pipe contained solids which needed maintenance/clean-out.
- The handle on the valve into the high-flow vegetated treatment cell needs to be periodically checked and fluttered to loosen solids blockages and ensure the system is working as designed.

Enclosures/Attachments:

Inspection pictures